REMARKS

Reconsideration and withdrawal of the rejections of the application is respectfully requested in view of the remarks and amendments herewith.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 26-52, 124-140, 154 and 155 are pending. Claims 1-25, 53-123 and 141-153 have been cancelled, and new claims 154 and 155 have been added, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

No new matter is added.

It is submitted that the claims, as originally presented and as herein presented, are patentably distinct over the prior art cited by the Examiner, and that these claims are and were in full compliance with the requirements of 35 U.S.C. §112. Amendments to the claims, as presented herein, are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112. Rather, these amendments are made simply for clarification and to round out the scope of protection to which Applicants are entitled. Support for the new claims is found throughout the specification and in the claims as originally presented.

II. THE PREVIOUS OBJECTIONS AND REJECTIONS ARE OVERCOME

As the Office Action makes no reference to the claim objections and the rejections under 35 U.S.C. §112 that were presented in the June 17, 2003 Office Action, it is believed that these were overcome by the amendments and remarks made in the November 17, 2003 response. The Examiner is respectfully invited to contact the undersigned if this is an incorrect assumption.

III. THE REJECTIONS UNDER 35 U.S.C. §102 ARE OVERCOME

Claims 26-52 and 124-140 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Isner et al. (WO 99/45775). The rejection is respectfully traversed. As Applicants have previously stated, the cited document does not teach or suggest the instant invention.

The Office Action states that Isner et al. "disclose[s] a method for forming new blood vessels or preventing or reducing the severity of blood vessel damage associated with ischemia ...comprising administering ... an effective amount of a vascularization agent such as Stem cell

factor ..., GM-CSF, VEGF and others." Office Action at 5-6. However, the Office Action fails to appreciate that Isner et al. describes only neovascularization, not the repair of damaged myocardial tissue.

It is again respectfully pointed out that a two-prong inquiry must be satisfied in order for a Section 102 rejection to stand. First, the prior art reference must contain **all** of the elements of the claimed invention. *See Lewmar Marine Inc. v. Barient Inc.,* 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987). Second, the prior art **must contain an enabling disclosure**. *See Chester v. Miller,* 15 U.S.P.Q.2d 1333, 1336 (Fed. Cir. 1990). A reference contains an enabling disclosure if a person of ordinary skill in the art could have combined the description of the invention in the prior art reference with his own knowledge of the art to have placed himself in possession of the invention. *See In re Donohue*, 226, U.S.P.Q. 619, 621 (Fed. Cir. 1985).

The instant claims relate to methods of repairing recently damaged myocardium and/or myocardial cells comprising the administration of a cytokine to a patient in need thereof. Further, the specification teaches the delivery of the cytokine directly to damaged cardiac tissue resulting from ischemia. In one aspect, the therapeutically effective dose of the cytokine is 100-500 μg/kg per day.

In contrast, it is again asserted that Isner et al. discusses neovascularization in general, with the only specific examples being of neovascularization or angiogenesis occurring in the cornea micropocket assay and the hindlimb ischemia model. Isner demonstrated only that an increase in vascular growth occurred in these models. Isner does not teach or suggest that the administration of growth factors repairs the tissue that has been damaged by ischemia. Isner is concerned only with the blood vessels themselves, not the surrounding tissue damaged by the lack of oxygen. In fact, the Office Action states that Isner is related to "preventing or reducing the severity of blood vessel damage." Office Action at 5. It is respectfully asserted that there is nothing in Isner that describes the repair of myocardial tissue. Furthermore, as to the neovascularization, Isner only describes the administration of cytokines at a dose of from 1-100 μg/kg per day.

Again, the Examiner's attention is respectfully directed towards page 16 of Isner, wherein it states that "[a]s described above and in the examples following, we have discovered means to promote angiogenesis and reendothelialize denuded blood vessels in mammals." Isner continues, stating that such methods may be used "for enhancing angiogenesis in a selected patient having

an ischemic tissue." While the methods are directed at patients who have suffered ischemic tissue damage, Isner's methods only provide stimulation of angiogenesis in order to **retard further tissue damage**.

Furthermore, the Office Action states that because "the method taught by Isner has the same step, [and the] same starting materials ... as the presently claimed methods, it is inherent that the method of Isner would also stimulate or mobilize the treated mammal's own somatic stem cells, including and not necessarily limited only to endothelial progenitor cells taught by Isner, to repair damaged myocardium and/or myocardial cells or for depositing the somatic stem cells in a cardiac or blood vessel tissue." Office Action at 5. As previously discussed, Isner only demonstrates neovascularization, and is not enabled for the repair damaged myocardium. Additionally, there is no teaching in Isner of the mobilization of any stem cell other than endothelial progenitor cells, and, contrary to the Office Action's assertion, there is no suggestion that other somatic stem cells may be mobilized by Isner's methods.

The present invention provides for the **actual repair of ischemic tissue, including myocardium**. The processes of retarding further damage, and repairing that which has already occurred are significantly distanced from one another such that no extrapolation between the two may be made. Methods and/or compositions to repair such damaged tissue are not contemplated, taught, or suggested by Isner et al. Consequently, the rejection over Isner et al. must fail. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) are respectfully requested.

REQUEST FOR INTERVIEW

If any issue remains as an impediment to allowance, an interview, with supervisory review, is respectfully requested, prior to issuance of any paper other than a Notice of Allowance, and the Examiner is additionally respectfully requested to telephonically contact the undersigned to arrange a mutually convenient time and manner for the interview. It is noted that Applicants' previous request for an Interview was not granted due to the time constraints between when the Examiner reviewed the November 17, 2003 Response and when the case needed to be acted upon, i.e. by February 6, 2004. Applicants are typically entitled to an interview prior to the issuance of a final Office Action, and as this was denied, Applicants request that an interview be conducted prior to the issuance of an Advisory Action. Upon agreement of a time and date for

said interview, Applicants will provide the Examiner with the specific issues to be discussed, as is allowed under the MPEP..

CONCLUSION

By this paper, this application is in condition for allowance. Favorable reconsideration of the application, reconsideration and withdrawal of the rejections of and objections to the instant application, and prompt issuance of the Notice of Allowance, or an early interview, with a view towards reaching agreement on allowance, are, therefore, all earnestly solicited.

Respectfully submitted,

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